

Curriculum Vitae

Stephanie Marciniak, Ph.D.

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Academic Positions

- 2016-Present Postdoctoral Scholar, Department of Anthropology, The Pennsylvania State University
2020-Present Affiliate Researcher, Department of History, Georgetown University

Education

- 2011-2016 Ph.D. in Anthropology, McMaster University, Hamilton
Thesis title: *Scourge of the Empire? Ancient Pathogen Genomics and the Biosocial Context of Malaria in Imperial-Era Southern Italy (1st-4th c. A.D.)*
Supervisors: Dr. Hendrik N. Poinar, Dr. Tracy L. Prowse
- 2006-2008 M.A. in Anthropology, Trent University, Peterborough
Thesis Title: *Postmortem Dismemberment and Fire Exposure: The Identification of Saw Mark Characteristics on Burned Bone*
Supervisor: Dr. Anne Keenleyside
- 2002-2006 H.BSc. Degree in Forensic Science and Anthropology University of Toronto, Mississauga

Areas of Interest

Infectious disease, ancient DNA, human-pathogen co-evolution, physiological stress, biosocial context of health, human evolutionary biology, forensic anthropology.

Publications

Peer-reviewed

- Sullivan, A.P., **Marciniak, S.**, O'Dea, A., Wake, T.A., Perry, G.H. Modern, archaeological, and paleontological DNA analysis of a human-harvested marine gastropod (*Strombus pugilis*) from Caribbean Panama. (2021). *Molecular Ecology Resources*, doi: 10.1111/1755-0998.13361
- Burney, D., Andriamialison, H., Andrianavoarivelo, R., Bourne, S., Crowley, B., de Boer, E., Godfrey, L., Goodman, S., Griffiths, C., Griffiths, O., Hume, J., Jungers, W., **Marciniak, S.**, Middleton, G., Noromalala E., Perez, V., Perry, G., Randalana R., Wright, H. (2020). Subfossil lemur discoveries from Beanka Protected Area in western Madagascar. *Quaternary Research*, 93, 187-203.
- Harris, A., Duggan, A.T., **Marciniak, S.**, Marshall, I., Fuller, B.T, Southon, J., Poinar, H.N., Grimes, V. (2019). Dorset Pre-Inuit and Beothuk foodways in Newfoundland, ca. AD 500-1829. *PLOS ONE*. doi.org/10.1371/journal.pone.0210187

Marciniak, S., Herring, D.A., Sperduti, A., Poinar, H.N., Prowse, T.L. (2018). A multi-faceted anthropological and genomic approach to framing *Plasmodium falciparum* malaria in Imperial period central-southern Italy (1st-4th c. C.E.). *Journal of Anthropological Archaeology*, 49, 210-224.

Marciniak, S., Perry, G.H. (2017). Harnessing ancient genomes to study the history of human adaptation. *Nature Reviews Genetics*, 18, 659–674.

Duggan, A.T., Harris, A.J.T., **Marciniak, S.**, Marshall, I., Kuch, M., Kitchen, A., Renaud, G., Southon, J., Fuller, B., Young, J., Fiedel, S., Golding, G.B., Grimes, V., Poinar, H.N. (2017). Genetic discontinuity between the Maritime Archaic and Beothuk populations in Newfoundland, Canada. *Current Biology*, 27, 3149-3156.

Marciniak, S., Prowse, T.L., Herring, D.A., Klunk, J., Kuch, M., Duggan, A.T., Bondioli, L., Holmes, E.C., Poinar, H.N. (2016). *Plasmodium falciparum* malaria in 1st-2nd century CE, southern Italy. *Current Biology*, 26, R1220-R1222.

Duggan, A. T., Perdomo, M. F., Piombino-Mascali, D., **Marciniak, S.**, Poinar, D., Emery, M. V., Poinar, H.N. (2016). 17th century Variola virus reveals the recent history of smallpox. *Current Biology*, 26, 3407-3412.

Marciniak, S., Klunk, J., Devault, A., Enk, J., Poinar, H. (2015). Ancient genomics: reconstructing human evolutionary pathways. *Journal of Human Evolution*. 79, 21-34.

Marciniak, S. (2014). Counterfeit antimalarials and the commodification of health. *Nexus: The Canadian Student Journal of Anthropology*, 22(1): 5-18.

Marciniak, S. (2009). A preliminary assessment of the identification of saw marks on burned bone. *Journal of Forensic Sciences*, 54, 779-785.

Book chapters

Marciniak, S., Poinar H.N. (2019). Ancient Pathogens Through Human History: A Paleogenomic Perspective. In: Lindqvist, C., Rajora, O.P. (Eds). *Paleogenomics: Genome-Scale Analysis of Ancient DNA*. Springer: Switzerland. pp. 115-138.

Marciniak, S. (2016). Hunting for pathogens: ancient DNA and the historical record. In: Mant, M., Holland, A. (Eds). *Beyond the Bones: Engaging with Disparate Datasets*. pp. 81-100. Elsevier.

Pre-prints

Marciniak, S., Bergey, C.M., Silva, A.M., Hałuszko, A., Furmanek, M., Veselka, B., Velemínský, P., Vercellotti, G., Wahl, J., Zariņa, G., Longhi, C., Kolář, J., Garrido-Pena, R., Flores-Fernández, R., Herrero-Corral, A.M., Simalcsik, A., Müller, W., Sheridan, A., Miliuskienė, Z., Jankauskas, R., Moiseyev, V., Köhler, K., Király, A., Gamarra, B., Cheronet, O., Szeverényi, V., Kiss, V., Szeniczey, T., Kiss, K., Zoffmann, Z.K., Koós, J., Hellebrandt, M., Domboróczki, L., Virag, C., Novak, M., Reich, D., Hajdu, T., von Cramon-Taubadel, N., Pinhasi, R., Perry, G.H. (2021). An integrative skeletal and paleogenomic analysis of prehistoric stature variation suggests relatively reduced health for early European farmers. *bioRxiv*, doi:10.1101/2021.03.31.437881 (March 31, 2021).

Marciniak, S., Mughal, M.R., Godfrey, L.R., Bankoff, R.J., Randrianatoandro, H., Crowley, B.E., Bergey, C.M., Muldoon, K.M., Randrianasy, J., Raharivololona, B.M., Schuster, S.C., Malhi, R.S., Yoder, A.D., Louis Jr., E.E., Kistler, L., Perry, G.H. Evolutionary and phylogenetic insights from a nuclear genome sequence of the extinct, giant 'subfossil' koala lemur *Megaladapis edwardsi*. *bioRxiv*, doi:10.1101/2020.10.16.342907v1 (October 17, 2020).

Research Grants and Fellowships

External

2019-2021	Wenner-Gren Post PhD Research Grant (\$16,656)
2014-2016	Social Sciences and Humanities Research Council Doctoral Award (\$40,000)
2013-2014	Ontario Graduate Scholarship (\$15,000)

Internal

2013	McMaster University Travel Grant (\$5,000)
2011-2015	McMaster University Scholarship (\$10,000)

Teaching Experience

2011 – 2015	Graduate Teaching Assistant, Department of Anthropology, McMaster University -Anthropology 1AA3 – Sex, Food and Death -Anthropology 1ZO3 – The Human Species: Becoming and Being Human -Anthropology 2EO3 – Human Variation and Evolutionary Change -Anthropology 3FA3 – Forensic Anthropology -Sociology 1A06 – Introduction to Sociology
2006 – 2008	Graduate Teaching Assistant, Department of Anthropology, Trent University -ANTH 240 – Introduction to Biological Anthropology -ANTH 341 – Human Osteology and Forensic Anthropology

Conference Presentations (*=cancelled due to COVID-19)

April 2021	Marciniak, S. , Mughal, M., Godfrey, L.R., Bergey, C.M., Bankoff, R.J., Crowley, B.E., Muldoon, K.E., Miller, W., Louis, E.E., Schuster, S.C., Mahli, R.S., Yoder, A.D., Kistler, L., Perry, G.H. Evolutionary and phylogenetic insights from a nuclear genome of the extinct giant koala lemur <i>Megaladapis edwardsi</i> . <u>Podium presentation</u> . American Association for Physical Anthropologists (Virtual).
April 2021	Marciniak S. , Poinar H., Prowse, T. Revealing the imprints of malaria in antiquity: an integrated ancient DNA and bioarchaeological framework. <u>Invited podium</u> . Paleopathology Association. (Virtual).
November 2020	Marciniak, S. , Mughal, M.R., Godfrey, L.R., Bankoff, R.J., Randrianatoandro, H., Crowley, B.E., Bergey, C.M., Muldoon, K.M., Randrianasy, J., Raharivololona, B.M., Schuster, S.C., Malhi, R.S., Yoder, A.D., Louis Jr., E.E., Kistler, L., Perry, G. Delving into the nuclear genome of an extinct, giant 'subfossil' koala lemur <i>Megaladapis edwardsi</i> . <u>Virtual podium presentation</u> . Northeastern Evolutionary Primatologists.

- June 2020* **Marciniak, S.**, Mughal, M., Godfrey, L.R., Bergey, C.M., Bankoff, R.J., Crowley, B.E., Muldoon, K.E., Miller, W., Louis, E.E., Schuster, S.C., Mahli, R.S., Yoder, A.D., Kistler, L., Perry, G.H. Deciphering the nuclear genome of the extinct giant koala lemur *Megaladapis edwardsi*. Podium presentation. Evolution. (Cleveland, OH).
- April 2020* **Marciniak S.**, Poinar H., Prowse, T. Revealing the imprints of malaria in antiquity: an integrated ancient DNA and bioarchaeological framework. Invited podium. Paleopathology Association. (Los Angeles, CA).
- April 2020* **Marciniak, S.**, Mughal, M., Godfrey, L.R., Bergey, C.M., Bankoff, R.J., Crowley, B.E., Muldoon, K.E., Miller, W., Louis, E.E., Schuster, S.C., Mahli, R.S., Yoder, A.D., Kistler, L., Perry, G.H. Evolutionary and phylogenetic insights from a nuclear genome of the extinct giant koala lemur *Megaladapis edwardsi*. Podium presentation. American Association for Physical Anthropologists (Los Angeles, CA).
- October 2019 **Marciniak, S.**, Bergey, C.M., Silva, A.M., Hałuszko, A., Furmanek, M., Veselka, B., Veleminsky, P., Vercellotti, G., Wahl, J., Zarina, G., Kiss, K., Köhler, K., Miliauskienė, Z., Simalcsik, A., Novak, M., Jankauskas, R., Hajdu, T., von Cramon-Taubadel, N., Pinhasi, R., Perry, G. The biological impact of the agricultural transition on human stature: evidence from ancient DNA and skeletal data. Podium presentation. Canadian Association for Physical Anthropology (Banff, AB).
- September 2019 **Marciniak, S.**, Bergey, C.M., Silva, A.M., Hałuszko, A., Furmanek, M., Veselka, B., Veleminsky, P., Vercellotti, G., Wahl, J., Kiss, K., Hajdu, T., von Cramon-Taubadel, N., Pinhasi, R., Perry, G. Plasticity and human stature: A 9,000 year perspective from ancient DNA and skeletal data. Poster presentation. Pennsylvania State University Postdoc Research Exhibition.
- June 2019 **Marciniak, S.**, Bergey, C.M., Silva, A.M., Hałuszko, A., Furmanek, M., Veselka, B., Veleminsky, P., Vercellotti, G., Wahl, J., Kiss, K., Hajdu, T., von Cramon-Taubadel, N., Pinhasi, R., Perry, G. Plasticity and human stature: A 9,000 year perspective from ancient DNA and skeletal data. Poster presentation. Evolution. (Providence, RI).
- March 2019 **Marciniak, S.**, Bergey, C.M., Silva, A.M., Hałuszko, A., Furmanek, M., Veselka, B., Veleminsky, P., Vercellotti, G., Wahl, J., Kiss, K., Hajdu, T., von Cramon-Taubadel, N., Pinhasi, R., Perry, G. Investigating human stature variation in prehistory with per-individual ancient DNA and osteological data. Podium presentation. American Association of Physical Anthropologists (Cleveland, OH).
- April 2018 **Marciniak, S.**, Poinar, H.N., Prowse, T.L. Malaria in the rural hinterland of southern Italy: A multi-faceted anthropological and genomic perspective from Vagnari (1st-4th c. CE). Symposium: Malaria in the Past: Current research into one of humanity's oldest plagues. American Association of Physical Anthropologists (Austin, TX).

- October 2017 **Marciniak, S.** Underrepresented pathogens in the archaeological record: integrating ancient DNA techniques within a multi-faceted framework. Invited podium presentation. Canadian Association for Physical Anthropology (Edmonton, AB).
- April 2017 **Marciniak, S.**, Prowse, T.L., Herring, D.A., Klunk, J., Kuch, M., Duggan, A.T., Bondioli, L., Holmes, E.C., Poinar, H.N. Molecular evidence for *Plasmodium falciparum* malaria in 1st-4th c. A.D. southern Italy. Podium presentation. American Association of Physical Anthropologists (New Orleans, LA).
- October 2016 **Marciniak, S.** Imprints of ancient pathogens: bridging the historical and molecular narratives. Invited podium presentation. Canadian Association for Physical Anthropology (Peterborough, ON).
- April 2016 **Marciniak, S.**, Duggan, A.T., Kuch, M., Allen, J., Jaing, C., Gardner, S., McLoughlin, K., Borucki, M., Poinar, H.N. Ancient pathogen genomics: a strategy for the parallel detection of multiple pathogens in archaeological samples. Podium presentation. American Association of Physical Anthropologists (Atlanta, GA).
- October 2015 **Marciniak, S.**, Duggan, A.T., Prowse, T.L., Poinar, H.N. It's not the needle, it's the whole haystack! Comparing pathogen DNA detection strategies in archaeological samples. Podium presentation. Canadian Association for Physical Anthropology (Winnipeg, MB).
- October 2015 **Marciniak, S.**, Duggan, A.T., Poinar, H.N. It's not the needle, it's the whole haystack! The parallelization of pathogen DNA capture in archaeological samples. Podium presentation. Michael G. DeGroot Institute for Infectious Disease Research (IIDR) Trainee Day (Hamilton, ON).
- March 2015 **Marciniak, S.**, Prowse, T.L., Poinar, H.N. Hunting for pathogens: ancient DNA and the historical record. Invited poster symposium, Beyond the Bones: Engaging with Disparate Datasets. American Association of Physical Anthropologists (St. Louis, MO).
- April 2013 **Marciniak, S.** Reconstructing the Disease Identity of Malaria in Ancient Rome. Podium presentation. Paleopathology Association (Knoxville, TN).

Invited Seminars/Workshops

- March 2021 **The promises and challenges of primate paleogenomics: Insights from the nuclear genome of a large extinct lemur *Megaladapis edwardsi*** (Rutgers University, Center for Human Evolutionary Studies)
- February 2021 **Ancient DNA: Revealing evolutionary history one genome at a time**, ANTH 4046 Human Evolutionary Genetics and Genomics (University of Cincinnati).

- February 2021 **Insights from the nuclear genome of a large extinct lemur *Megaladapis edwardsi*** (Bergey lab, Department of Genetics, Rutgers University)
- November 2020 **Ancient DNA: Revealing evolutionary history one genome at a time.** BIOS 396, Personal Genomics (Lehigh University).
- April 2020 **Malaria in ancient Rome: Integrating ancient DNA, bioarchaeology and the historical record**, ANTH 545, Microbial Anthropology (Pennsylvania State University)
- March 2020 **Harnessing ancient genomes to study health in the past**, HIST 099, Science of the Human Past (Georgetown University)
- November 2018 **A multi-faceted paleogenomic and anthropological investigation of malaria in Roman antiquity**, “New Approaches to Old Diseases in Late Antiquity” (Georgetown University)
- September 2018 **Using new technologies to study the relationship between pathogens and ancient migrations**, “Diaspora, Migration and the Sciences” (Lorentz Center, Leiden)
- March 2016 **The Race Concept in Anthropology**, ANTH 1AB3 Introduction to Anthropology: Race, Religion and Conflict (McMaster University)
- February 2015 **Pharmacogenomics**, ANTH 4GS3 Genetics and Society (McMaster University)
- November 2013 **The Race Concept in Anthropology**, ANTH 2EO3 Human Variation and Evolutionary Change (McMaster University)
- April 2013 **Introduction to Forensic Anthropology**, Integrated Science Symposium, Workshop on Forensic Science (McMaster University)

Professional Associations

Society for the Study of Evolution (SSE); Canadian Association for Physical Anthropology (CAPA); American Association of Biological Anthropologists (AABA); Paleopathology Association (PPA); Association for Anthropological Genetics (AAG)